

REMARKS

BEST AVAILABLE COPY

This amendment is submitted in response to the Office Action mailed on October 19, 2005. Claims 1-21 are pending and have been rejected. Favorable reconsideration of the application, as amended, is respectfully requested.

1. 35 U.S.C. 103(a) Rejections over Miller et al. in view of Marzocchi et al.

Claims 1 and 3-8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (US 6,228,785) in view of Marzocchi et al. (US 4,265,563). Miller et al. discloses roof coverings including a glass fiber roofing mat, an asphalt-based coating material on the mat, and roofing granules embedded in the upper surface of the coating material. Marzocchi et al. discloses a composition for road paving and repair including asphalt, glass flakes, and a mixture of an amino silane coupling agent and elemental sulfur to increase the bonding between the glass flakes and the asphalt. Marzocchi et al. states that the glass flakes and the coupling agent added to the asphalt improves properties such as strength, creep, permeability, and oxidation resistance of the composition. The Examiner stated that it would have been obvious to modify the glass fiber mat of Miller et al. with the sizing agent of Marzocchi et al. to improve the adhesion between the glass fibers and the asphalt-based coating material. Further, the Examiner stated that although Marzocchi et al. does not explicitly teach the claimed tear strength improvement, it is reasonable to presume that this property is inherent to Marzocchi et al.

Amended claims 1 and 9 state that the tear strength of the roof covering is increased by at least about 5% as measured by ASTM D 1922. Applicants respectfully disagree that this property is inherent to Marzocchi et al. In the declaration under 37 CFR 1.132 submitted with this amendment, Mr. Jones states that his opinion is that the Marzocchi et al. composition does not have a 5% improvement in tear strength. He states that unlike the roof covering of the present invention, the Marzocchi et al. composition does not include a roofing mat formed from fibers, but rather it includes discrete flakes of glass dispersed in the asphalt. The Marzocchi et al. composition does not have a good tear strength because there is nothing like a roofing mat to hold it together and keep it from tearing. The discrete flakes of glass in the

BEST AVAILABLE COPY

asphalt can be easily separated from each other, so they do not provide good tear strength. He states that even with the addition of the mixture of amino silane and elemental sulfur to the asphalt and glass flakes, the tear strength of the composition is poor. Further, Mr. Jones states that the Marzocchi et al. composition is not the type of composition that can be tested for tear strength using ASTM D 1922. Enclosed with the declaration are summaries of the ASTM D 1922 test for tear strength, and the ASTM D 228 standard for asphalt shingles and roll roofing which refers to the ASTM D 1922 test as one of the standard test methods. The ASTM D 1922 test is applicable to the testing of thin sheeting, such as asphalt shingles and roll roofing, for tear strength. Mr. Jones states that the Marzocchi et al. composition is not in the form of thin sheeting, and it thus cannot be measured by this test. He further states that the Marzocchi et al. composition is for road paving and repair, and thus it is significantly different in form and properties from a roof covering.

Moreover, Applicants respectfully submit that it would not have been obvious to modify the glass fiber mat of Miller et al. with the sizing agent of Marzocchi et al. The Examiner states that the motivation would be to improve the adhesion between the glass fibers and the asphalt-based coating material. However, there is no suggestion in Miller et al. of any need for improved adhesion between the glass fiber mat and the asphalt-based coating material. Also, there is no suggestion in Marzocchi et al. that the coupling agent would be useful in a roof covering to improve the bond between a roofing mat and a coating material, in contrast to the Marzocchi et al. invention relating to discrete glass flakes in an asphalt composition for road paving and repair. Importantly, there is no suggestion in Marzocchi et al. that the coupling agent would be useful for improving the tear strength of a roof covering. Tear strength is not an issue in Marzocchi et al., because the discrete glass flakes are not intended to hold the composition together and keep it from tearing. Further, there is no suggestion in Miller et al. of any need to improve the tear strength of the roof covering. Miller et al. relates to impact resistance, not tear strength.

BEST AVAILABLE COPY

2. 35 U.S.C. 103(a) Rejections over Miller et al. in view of Marzocchi et al., and further in view of Williams et al.

Claims 2 and 9-21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. in view of Marzocchi et al., and further in view of Williams et al. (US 4,265,563). Williams et al. discloses polymer composite articles including a polymer, an inorganic substrate and a polysulfide silane coupling agent. The Examiner stated that it would have been obvious to modify the glass fiber mat of Miller et al. with the sulfide silane coupling agent of Williams et al. to simplify the coating of the glass fibers to one chemical treatment and to improve the strength of the resin phase. Further, the Examiner stated that although Williams et al. does not explicitly teach the claimed tear strength improvement, it is reasonable to presume that this property is inherent to Williams et al.

Applicants respectfully disagree that the improvement in tear strength is inherent to Williams et al. In his declaration under 37 CFR 1.132, Mr. Jones notes that Williams et al. discloses polymer composite articles including a polymer, an inorganic substrate and a polysulfide silane coupling agent. The polymer composite articles include rubber, thermoplastic and thermosetting resins, paints, varnishes, inks and the like; preferred are vulcanized rubber articles such as tires, gaskets and hoses. The coupling agent is said to provide a strong chemical bridge between the inorganic substrate and the polymer. However, Mr. Jones states that there is no suggestion in Williams et al. of an improvement in tear strength. The articles disclosed in Williams et al. are either flowable or are so hard that tearing is not a substantial issue. There is no disclosure of thin sheeting that would be susceptible to tearing. Therefore, Mr. Jones states that his opinion is that it cannot be said that Williams et al. inherently discloses a 5% improvement in tear strength. He further states that the Williams et al. composite articles are not the type of articles that can be tested for tear strength using ASTM D 1922, because there is no disclosure of composite articles in the form of thin sheeting. Further, he notes that the present claims relate to asphalt-based roof coverings, whereas the Williams et al. composite articles include polymers and not asphalt. The Williams et al. composite articles are significantly different in

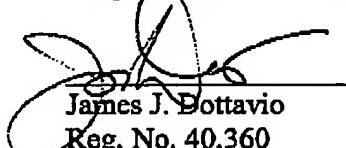
BEST AVAILABLE COPY

composition, form and properties from the asphalt-based roof coverings of the present invention.

Moreover, Applicants respectfully submit that it would not have been obvious to modify the glass fiber mat of Miller et al. with the coupling agent of Williams et al. The Examiner states that the motivation would be to simplify the coating and to improve the strength of the resin phase. However, there is no suggestion in Miller et al. of any need for improved adhesion between the glass fiber mat and the asphalt-based coating material. Also, there is no suggestion in Miller et al. that the coupling agent would be useful in a roof covering to improve the bond between a roofing mat and a coating material, in contrast to the Miller et al. invention relating to polymer composite articles. Importantly, there is no suggestion in Miller et al. that the coupling agent would be useful for improving the tear strength of a roof covering. Tear strength is not an issue in Williams et al., because the composite articles disclosed in Williams et al. are either flowable or are so hard that tearing is not a substantial issue. Further, there is no suggestion in Miller et al. of any need to improve the tear strength of the roof covering.

In view of the above, Applicants respectfully submit that the claimed invention is patentable over the prior art.

Respectfully submitted,



James J. Dottavio

Reg. No. 40,360

Owens Corning

2790 Columbus Road, Rt. 16

Granville, OH 43023

(740) 321-7167

Date: 1-9-06